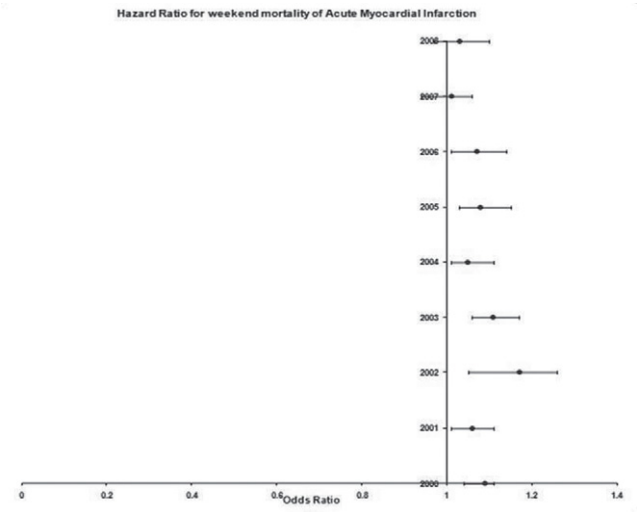

Fig 1

Conclusion: This study confirms higher mortality of AMI patients admitted on weekends in the beginning of the decade;The difference in mortality of AMI is not observed in recent years reflecting improved care.

TCT-338

Associations between symptom-to-door time and biomarkers on 12-month mortality in patients with acute myocardial infarction

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Background: Little is known about the associations between symptom-to-door (STD) time and biomarkers including N-terminal pro-B type natriuretic peptide (NT-proBNP) and high sensitivity C-reactive protein (hs-CRP) in patients with acute myocardial infarction (AMI).
Methods: Between November 2005 and February 2010, 1,233 patients were followed up more than 12-month after their AMI and finally analyzed in this study. The patients who had STD time more than 3 days were excluded from this study. Patients were categorized into 3 groups based on their STD time; Group I (STD time < 6-hour, n=767), Group II (6-hour ≤ STD time ≤ 12-hour, n=181), and Group III (STD time > 12-hour, n=285).
Results: The 12-month mortality was significantly higher in Group III (13.7%) compared to Group I (9.3%) and Group II (11.0%)(p for trend = 0.037). The serum levels of log-transformed NT-proBNP were significantly higher in Group III (7.48±1.70 pg/mL) compared to Group I (5.77±2.06 pg/mL) and Group II (6.64±1.73 pg/mL)(p for trend<0.001). The serum levels of log-transformed hs-CRP were also significantly higher in Group III (1.72±1.74 mg/L) compared to Group I (0.87±1.55 mg/L) and Group II (1.21±1.69 mg/L)(p for trend<0.001). The patients with symptomatic heart failure at admission (Killip class >2) were significantly higher in Group III (p=0.041), and left ventricular ejection fraction was significantly higher in Group I (p=0.006). In Cox proportional hazards model, Group III (crude hazard ratio [HR] 1.516, 95% confidence interval [CI] 1.026-2.241, p =0.037) had significantly higher 12-month mortality compared with Group I. In Group III, elevated serum levels of log-transformed NT-pro BNP (HR 2.761, 95% CI 1.084-7.036, p =0.033), not log-transformed hs-CRP, in addition to age (HR 1.114, 95% CI 1.025-1.210, p =0.011) and body mass index (HR 1.423, 95% CI 1.087-1.864, p =0.010) were independent predictors of 12-month mortality after adjustment for confounding variables.
Conclusion: The STD time is significantly associated with the serum levels of NT-proBNP and hs-CRP, and NT-proBNP is independent predictor of 12-month mortality, particularly in patients with longer STD time.

TCT-339

Transradial Intervention Procedure for Un-Shock, ST Segment Elevation Myocardial Infarction Patients with Palpable Radial Artery

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Background: Primary Percutaneous Coronary Intervention (PPCI) which is most performed via Trans-Femoral Intervention Procedure (TFIP) is currently a standard of care. Trans-Radial Intervention Procedure (TRIP) has been emerging around the world as an alternative approach in both elective and primary angioplasty. We examine whether TRIP which provides efficacy, less bleeding and more comfortable for patient is as feasible as the standard TFIP.
Methods: A total of 524 consecutive patients who underwent PPCI for STEMI from 1/2009 to 12/2010 were enrolled into cross-sectional study. Patients who were un-shock and had palpable radial pulses were randomly assigned to receive TRIP and TFIP for primary angioplasty. The study endpoints were partial and total procedure, fluoroscopy time (minute), and amount of contrast media (ml).
Results: There were 249 and 275 patients in TRIP and TFIP groups respectively. All patients were pretreated with dual antiplatelet therapy and heparin regimen of 60U/kg. The baseline clinical characteristics was comparable between the 2 groups. Preparation (9.75±4.33 vs 8.92±4.10; p=0.25), aortic root approach (2.28±2.47 vs 2.12±2.57; p=0.474), engagement (1.78±1.84 vs 1.56±1.31; p=1.31), revascularization (15.25±6.90 vs 14.50 ±7.36; p=0.242) time and contrast media (155.64±44.42 vs 153.62±103.62; p=0.79) were comparable between the 2 groups. Puncture time was in-favor for TRIP (3.06±2.57 vs 2.37±2.45; p=0.003) and as a result, lab door-to-balloon time in TFIP group was shorter than TRIP group (22.13±8.623 vs 20.21±8.006; p=0.011). Fluoroscopy time in TRIP group was also longer than TFIP group (10.08±6.58 vs 8.18±4.24; p=0.001). However, total procedure time was statistically comparable between the two groups (51.09±15.63 vs 48.50±15.71).
Conclusion: TRIP showed statistically non-inferior to TFIP on almost procedural parameters during PPCI for un-shock STEMI patients with palpable radial artery. Although puncture and fluoroscopy time of TRIP remained a short gap to TFIP, TRIP is really feasible and can be considered as alternative approach in PPCI.

TCT-340

Efficacy and Safety Of The M-Guard Stent In Primary Percutaneous Coronary Intervention for ST-Elevation Myocardial Infarction

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Background: In recent years many strategies have been developed to treat intracoronary thrombus in STEMI patients undergoing primary PCI. M-Guard(MGS), is a bare metal stent covered by a thin polymer mesh on its external surface, designed to trap thrombus between the stent and vessel wall, providing embolic protection. Aim of this study was to evaluate the effectiveness and safety of MGS at 30 days and 1 year after pPCI and compare its short term results to a control group from the pre MGS era. We also examined if the benefit from the use of MGS was independent from the use of thrombus aspiration(TA) during pPCI.
Methods: 73 consecutive STEMI patients with visible thrombus who underwent pPCI were enrolled in the study [63.4±13.5 years,men:53]. MGS was successfully placed in 68(93.1%). TA (24/68-35.29%) and balloon predilation (35/68-51.47%) was at the operators discretion. This group was retrospectively compared with 44 consecutive STEMI patients who underwent pPCI before the introduction of TA or the MGS. They served as control group. No differenceses between the 2 groups in baseline characteristics.
Results: Target vessel revascularization was 0/68 at 30 days and 4/68(5.88%) at 1 year. Cardiac deaths:0/68 at 30 days and 2/68 at 1 year, both possible stent thrombosis. TIMI3 was achieved in 62/68(91.17%). Final TIMI was 2.88±0.53 in the MGS group vs 2.53±0.88 in the control group(p: 0.015). Myocardial Blush Grade(MBG) was 2.36±0.91 vs 1.83±1.21 (p: 0.009) at the end of pPCI respectively. No-reflow phenomenon occurred in 2/68 patients in the MGS group vs 8/44 in the control (p:0.008). The subgroup of patients from the MGS group that TA was not performed were 44 individuals. Final TIMI for them was 2.9±0.3 (p:0.01), compared to the control group and MBG:2.43±0.88 (p:0.009). No-reflow:0/44,(p:0.006).
Conclusion: -In the setting of pPCI, MGS exhibited low TVR and thrombosis rates at 1 and 12 months, in the high risk group of STEMI patients. -With the use of MGS final TIMI flow and MBG are higher and the no-reflow incidence lower. -The benefit from the use of MGS is independent from TA.

TCT-341

Prognostic Consequence of Periprocedural Hemoglobin Decrease with and without Observed Blood Loss in Patients with ST-elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention

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Background: Little is known regarding the frequency and sequelae of periprocedural hemoglobin (Hb) drops with and without observed blood loss in patients undergoing primary PCI (pPCI) for STEMI. We sought to establish the prognostic value of a periprocedural Hb decrease with and without observed bleeding.
Methods: We assessed the occurrence of periprocedural hemoglobin decrease with and without observed blood loss occurring within 10 days from index pPCI, in 1762 consecutive STEMI patients undergoing pPCI between 1-1-2003 and 31-8-2008, in a large tertiary PCI center. Patients presenting in shock were excluded from our analysis (final cohort n = 1602). Bleeding and bleeding source were recorded from chart review. A periprocedural Hb decrease was calculated by subtracting the nadir Hb during index admission (within 10 days from index procedure) from the baseline Hb. The primary endpoint was one-year all-cause mortality. The prognostic values of a periprocedural Hb decrease with and without observed blood loss were calculated using stepwise Cox